



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

54

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/664,273	09/18/2000	Jean-Claude Constantin	32978	4537

116 7590 08/25/2005

PEARNE & GORDON LLP  
1801 EAST 9TH STREET  
SUITE 1200  
CLEVELAND, OH 44114-3108

EXAMINER

LAO, LUN S

ART UNIT PAPER NUMBER

2644

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/664,273

**Applicant(s)**

CONSTANTIN, JEAN-CLAUDE

**Examiner**

Lun-See Lao

**Art Unit**

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Introduction***

1. This action is response to the amendment filed on 06-13-2005. Claims 1-17 have been amended and claims 18-20 have been added. Claims 1-20 have been pending.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show described labels on the drawings as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

Art Unit: 2644

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The driven " A method to control a transmission system comprising at least one transmitter and at least one receiver, the method comprising the steps of:

transmitting a signal through an information channel, the signal being modulated in at least one of amplitude, frequency and phase, transmitting configuration parameters through a control channel, independent of the signal transmitted through the information channel, and implementing adjustments in the receiver according to the configuration parameters to enable demodulation of the signal transmitted through the information channel (see specification page 5-6) was not supported in the further detail in the specification nor in any of the claim.

The original specification fails to disclose the independent of the signal transmitted through the information channel, and implementing adjustments in the receiver

according to the configuration parameters to enable demodulation of the signal transmitted through the information channel as cited in claim 1.

5. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The driven “a wireless transmission system comprising : a receiver Comprising an antenna; at least one transmitter; a signal which is modulated in at least one of amplitude, frequency and- phase, the signal being transmitted from one of the at least one transmitters to the receiver, means for generating and transmitting configuration parameters for enabling demodulation of the signal, and the configuration parameters being transmitted independent of the signal; and means for receiving and processing the configuration parameters, said means being provided in the receiver” (see specification page 5-6) was not supported in the further detail in the specification nor in any of the claim.

The original specification fails to disclose that means for generating and transmitting configuration parameters for enabling demodulation of the signal, and the configuration parameters being transmitted independent of the signal as cited in claim 11.

6. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Art Unit: 2644

The driven " A receiving device comprising: a receiver for receiving signals which are modulated in at least one of frequency and phase, the signals being received at an antenna connected through a filter-amplifier unit and a consecutive mixer to a demodulator to generate the demodulated signals based on configuration parameters, the mixer being loaded with an output signal from a synthesizer which is controlled by a control unit, transceiving means, for receiving the configuration parameters independent of a signal received by the receiver, the transceiving means being connected to the control unit" (see specification page 5-6) was not supported in the further detail in the specification nor in any of the claim.

The original specification fails to disclose a demodulator to generate the demodulated signals based on configuration parameters and for receiving the configuration parameters independent of a signal received by the receiver, the transceiving means being connected to the control unit as cited in claim 14.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson (US PAT. 5,721,783).

Art Unit: 2644

Consider claim 11 Anderson teaches that a wireless transmission system comprising (see fig.2): a receiver comprising an antenna (see fig.9, 900); at least one transmitter (900); a signal which is modulated in at least one of amplitude, frequency and- phase (see col. 12 line 47-col. 13 line 22), the signal being transmitted from one of the at least one transmitters to the receiver, means (see fig.9) for generating and transmitting configuration (by dsp control the switches) parameters (916,924, 928) for enabling demodulation of the signal, and the configuration parameters being transmitted independent of the signal (by push the keyboard and see col. 20 line 48-col. 21 line 31); and means (see fig.9, 916, 924,928) for receiving and processing the configuration parameters, said means (see fig.9, 916, 924,928) being provided in the receiver (see col. 13 line 3-col. 15 line 11).

Consider claims 12-13, Anderson teaches that the means (see fig.9) for generating and transmitting the configuration parameters (916, 924, 928) are provided in at least one of a remote control (see fig.2 (22 by signal F1))), a transmitter (see fig.1, (22, (F1))), a control unit (23) connected to a loop antenna and a configuration unit (see fig.9, 948 and see col.21 line 30-col. 22 line 61); and transmission system of the receiver is connected to at least one of a hearing aid and an electro- acoustic transducer (see fig.1 and abstract).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2644

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 3-4, 6-10 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US PAT. 5,721,783) in view of Topholm (US PAT. 5,710,819).

Consider claim 1, Anderson teaches that a method to control a transmission system comprising at least one transmitter and at least one receiver, the method comprising the steps of:

transmitting a signal through an information channel, the signal being modulated in at least one of amplitude, frequency and phase (see fig. 9), transmitting configuration parameters (916,924, 928) through a channel, independent of the signal transmitted through the information channel (when it is silence and see col. 20 line 48-col.21 line 30), and implementing adjustments (see fig.9. (948)) in the receiver according to the configuration parameters to enable (such as switch (962,902,904)) demodulation of the signal transmitted through the information channel (col.13 line 3-col. 15 line 11), but Anderson does not clearly teach a control channel. However, Topholm teaches a control channel (see fig.1 and col. 2 line 10-col. 3 line 20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Tephholm into Anderson to provide a hearing system running faster by two separated channel, such as a communication channel and a control channel.



Consider claim 3-4, Anderson teaches that the receiver (see fig. 8) is programmed by a configuration unit (see fig.9), and wherein programming data for programming the configuration unit is transmitted through the channel (see col. 21 line 30-col. 22 line 61 and see the discussion above of claim 1); and the information is transmitted from the receiver (see fig.8) through the channel to the configuration unit ( fig.9 and see col. 21 line 30-col. 22 line 61 and see the discussion above of claim 1).

Consider claims 6-7, Anderson teaches that the demodulation of the signal based on the configuration parameters (see fig.9 (948)) is carried out using a generated frequency to produce at least one demodulated signal, and wherein the at least one demodulated signal is fed to another processing unit (see fig.8 and see col. 21 line 30-col. 22 line 61), of at least one of a hearing aid or an electro-acoustic transducer (see fig.1 and col. 21 line 30-col. 22 line 61); and a total transfer function resulting from the transmitter and the receiver (see fig.9) is modified in the receiver (900,960,970) by transmitting transfer function (such as least mean squares) parameters of the transmitter through the channel to the receiver, said transfer-function parameters comprising amplification and frequency of transmission and wherein the transfer function of the receiver (900, 960, 970) is modified in relation to a desired total transfer function (col. 27 line 25-col. 29 line 17).

Consider claims 8-10, Anderson teaches that an antenna (see fig.8, 40) receiving the modulated signal is tuned to a particular transmission frequency (see col. 11 line 19-col.12 line 46); and the transmission through the channel is carried out using FSK (frequency shift keying) modulation (see col. 11 line 1-18 and see the discussion above

Art Unit: 2644

of claim 1); and the audio signals are transmitted from the transmitter to at least one receiver (fig. 2) wherein the at least one receiver is connected to at least one of a hearing aid and an electro-acoustic transducer (see col. 11 line 19-col.12 line 46).

Consider claims 18-19, Topholm teaches that the control channel (see fig.1, between 1 and 9) is separate from the information channel (21 serial interface can be connected with a computer and see col. 2 line 10-col. 3 20 and col. 4 lines 33-50); and the control channel (see fig.1, between 1 and 9) has a carrier frequency different from a carrier frequency of the information channel inherently (21 serial interface can be connected with a computer and see col. 2 line 10-col. 3 20 and col. 4 lines 33-50).

Consider claim 20 Anderson teaches that configuration parameters (see fig.9 916, 924, 928) comprise and the carrier frequency of the information identification of channel (see fig.9 and col.8 line 53-col. 9 line54).

8. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US PAT. 5,721,783) as modified by Topholm (US PAT. 5,710,819) as applied to claim 1 above, and further in view of Eliwin (US PAT. 6,463,28).

Consider claim 2, Anderson and Topholm do not clearly teach that an identification code is transmitted through the control channel and wherein the identification code is checked in the receiver and base on the check the adjustments are carried out in the receiver according to corresponding configuration parameters (see the discussion above of claim 1).

However, Eliwin teaches that an identification code (such as a number of preset hearing profiles) is transmitted through the control channel and wherein the

Art Unit: 2644

identification code (such as a number of preset hearing profiles) is checked in the receiver and based on check the adjustments are carried out in the receiver, according to corresponding configuration parameters (see col.1 line 49-col.2 line 30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Elwin into the teaching of Anderson and Topholm to provide a system determining how to adjust the output sound so that the user will be better able to hear it.

Consider claim 5, Elwin teaches that one or more identification codes are addressed to a plurality of receivers (see col.1 line 49-col.2 line 30).

11. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US PAT. 5,721,783) in view of Schotz (WO 97/29550).

Consider claim 14, Anderson teaches a receiving device comprising : a receiver for receiving signals (see fig.9, 900, 960, 970) which are modulated in at least one of frequency and phase, the signals being received at an antenna (40) connected through a unit and a consecutive mixer (930, 938) to a demodulator (934) to generate demodulated signals based on configuration parameters (916, 924, 928), the mixer being loaded with the an output signal from a synthesizer which is controlled by a control unit (948 and see col. 8 line 54-col. 9 line 54), and transceiving means (900, 960, 970) for receiving the configuration parameters independent of a signal received by the receiver(when it is silence and see col. 20 line 48-col.21 line 30), the transceiving means (900, 960, 970) being connected to the control unit (948 and see col. 21 line 30-

Art Unit: 2644

col.22 line 61); but Anderson does not clearly teach an antenna connected through a filter-amplifier unit.

However, Schotz teaches an antenna connected through a filter-amplifier unit (see fig.3a, 138, 154 and page 14 lines 14-33) .

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Schotz into Anderson to provide a the user to listen to high quality audio in any remote location without external wires or independent equipment.

Consider claim 15 and 17, Anderson teaches that the transceiving means (see fig.4, 40) comprises a transceiver (40), a transceiving coil (41,42) and a capacitor to adjust the transceiving coil (see fig.4, 42, 41 and col. 11 line 19-col. 12 line 46); and a hearing aid comprising the receiver (see fig.1 and col. 27 lines 4-24).

Consider claim 16, Schotz teaches an integrated circuit on a CMOS chip, the integrated circuit comprising the filter-amplifier unit (see fig. 3a, 138, 154), the mixer (168), the demodulator (168), the synthesizer (160) and the control unit (see fig. 3b, 164 and see page 14 line 34-page 35 line 26).

### ***Response to Arguments***

12. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2644

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jackson (WO 98/00997) is recited to show other related the method for controlling a transmission system, application of the method, a transmission system, a receiver and a hearing aid.

15. Any response to this action should be mailed to:

Mail Stop \_\_\_\_ (explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:  
**(703) 872-9306**

Hand-delivered responses should be brought to:  
Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Art Unit: 2644

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (571) 272-7501. The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao,Lun-See  
Patent Examiner  
US Patent and Trademark Office  
Knox  
571-272-7501  
Date 08-12-2005

  
VIVIAN CHIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600